Related aspects of the invention provide a SAN as described above in which the host includes a kernel mode process that executes, e.g., during an initial phase of host boot-up, that validates identifications made by the user mode process during a prior boot-up.

Still further aspects of the invention provide a SAN as described above in which the filter passes requests for access to peripheral devices for which the kernel mode process indicates the identification is not valid, unless those requests comprise claims for access to peripheral devices that are hard disk devices that are not designated as assigned to the digital data processor.

Ensuring Validity of Data from the Scanners

Still further aspects of the invention provide a SAN, e.g., of the type described above having a plurality of components such as host digital data processors and storage devices. A store, e.g., resident on a manager digital data processor, contains one or more objects (or other data constructs) that represent information gathered from the hosts, i.e., scans. Further such objects represent components in the SAN and/or relationships between and among those components. Though these objects can be of the same type, they are referred to here for convenience as scan objects, component objects and relationship objects, respectively. A discover engine or other functionality executing on the manager digital data processor validates information gathered from a selected host concerning a selected component or relationship based on a scan object, if any, that is associated with a component object or relationship object, respectively, corresponding pertaining to the selected component or relationship.

In related aspects, the invention provides a SAN as described above in which a scanner executing on each of the hosts gathers information – e.g., a "scan" -- regarding that host and the storage devices (or other SAN components) that host can "see," as well as relationships therebetween. The discover module responds, according to related aspects of the invention, to selected changes discerned from a scan by validating the information from which the change was discerned. This can be accomplished by traversing the component objects or relationship objects to find those for the same component or relationship, respectively, underlying the apparent change. Scans containing information regarding that component or relationship are identified via the scan objects associated with any matching component or relationship objects.

For example, upon discerning from a scan that a storage device has apparently been removed, the component objects can be traversed to determine which contain information regarding the apparently removed device. Scans providing information from which the change can be validated are identified via association of their respective scan objects with any matching component objects founds during traversal. Those other scans can be checked to see if they are in accord with the scan in which the change was discerned and/or the scanners that generated the scan(s) can be re-executed. Alternatively, according to one aspect of the invention, the apparent change is ignored upon finding any such other scans.

Further aspects of the invention provide a SAN as described above in which the store maintains objects representing component attributes, in addition to objects representing scans, components and relationships. All of these objects, according to other aspects of the invention, can reference corresponding data in tables of attributes, scans, components, and relationships, respectively. At least one of the objects, moreover, can include a unique identifier referencing the corresponding table and the data field therein.

Yet still further aspects of the invention provide SAN as described above wherein the discover engine validates only selected changes discerned from the scan. Thus, for example, according to one aspect of the invention, such an engine can validate changes representing removal or decoupling of storage devices and/or removal (or missing) relationships between components.